

R E M A R K S

The last Office Action has been carefully considered. Applicants have canceled claims 1-5 and rewritten them as claims 6-10 in order to overcome the rejections based on 35 U.S.C. § 112, second paragraph. Applicants respectfully submit that the presently amended claims are patentably distinct over the cited art.

Claims 1-2 and 4 have been rejected under 35 U.S.C. § 102(a) as anticipated by Barnikol and claims 1 and 4 under § 102(b) as anticipated by another article by Barnikol. Applicants respectfully disagree.

The subject of newly rewritten claim 6 now is directed to a system containing a solution of cross-linked hyperpolymeric hemoglobins which have a quaternary structure. The treatment of such polymers by precipitation, chromatography or partial dissolution in order to prepare a molecularly uniform hyperpolymeric hemoglobins cannot be arrived at from the cited art, since the fractionation of such molecules, as in the present invention, is not known from the state of the art.

Since giant hemoglobin molecules are chain molecules, it would rather have been expected based on the prior art that passage of such giant molecules through the essentially circular pores of an ultrafilter would not lead to any molecular weight-specific separation if for no other reason than the longer chain character of the hemoglobin hyperpolymers. Such a view point is further

supported by the fact that it has not been previously possible to remove high molecular weight portions in the filtrate.

Furthermore, the preparation of hemoglobin hyperpolymers has succeeded only very recently, thus there is basically little experience with respect to the physical and chemical properties of these giant molecules. Consequently, their behavior during the precipitation process also was not foreseeable and the discovered suitability of the present method was a surprising result.

Similarly, there is as yet no experience in dealing with giant molecules such as hemoglobin hyperpolymers using chromatography. See, Page 8, paragraph 2 through Page 9, paragraphs 2-3 of the description.

Based on the above, applicants respectfully submit that the present invention is patentably distinct from the cited art and its allowance therefore is earnestly solicited.

Should the Examiner have any queries regarding the above,  
she is invited to call the undersigned.

Respectfully Submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on September 30, 1996.

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